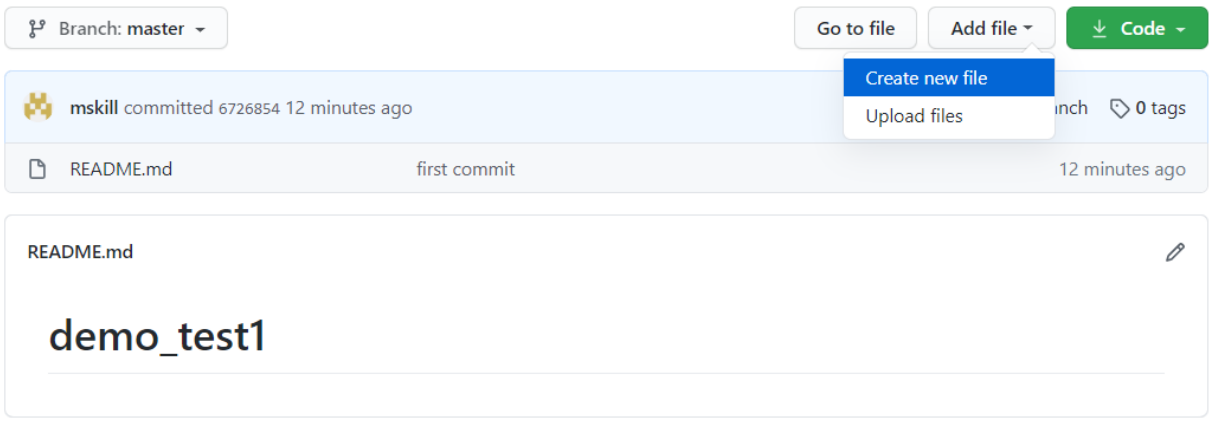
Exercise 6 - Branching and Merging via Command Line

Objective for Exercise

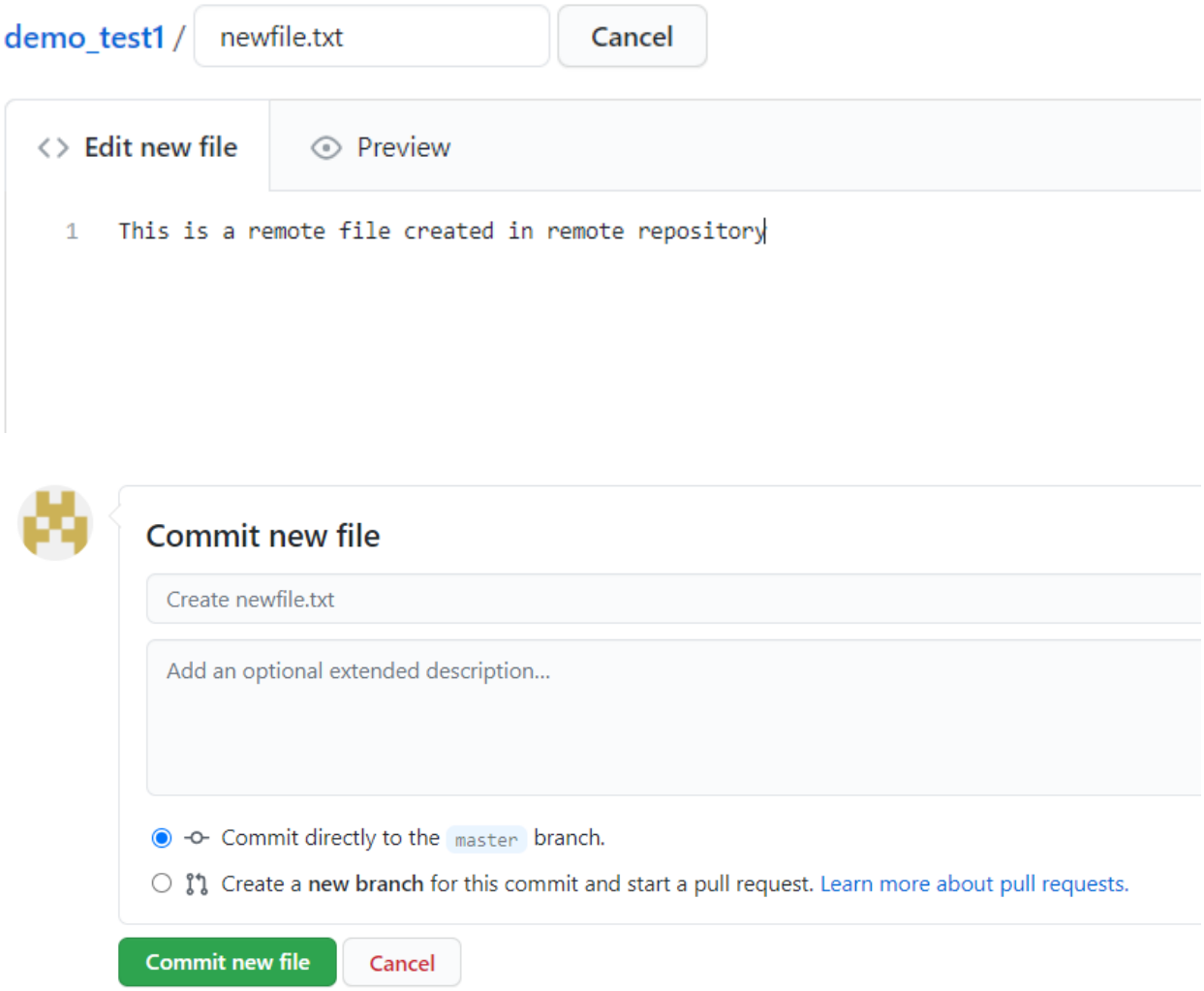
- To add file to repository on GitHub
- To add file to repository on GitHub through command line

Note: These instructions works on BASH terminal on Windows & Mac terminals.

Click 'Add file' to add a file



Provide the file name and add a description to that file. To commit the changes in the repository, click ‘Commit New File’



Adding a file remotely will not be there in the local directory. Check the files using `dir`

```
Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (master)
$ dir
README.md
```

As per the screenshot above, there is 1 file in the repository.

To pull the file that is added in remote repository to local repository, we use PULL command `git pull`

```
Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (master)
$ git pull
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), done.
From github.com:mskill/demo_test1
   6726854..664421a  master     -> origin/master
Updating 6726854..664421a
Fast-forward
 newfile.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 newfile.txt
```

After pull, if I check the local repository using dir, there are 2 files as shown:

```
Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (master)
$ dir
newfile.txt  README.md
```

To add a branch in master branch `git branch branchname`

Switch the branch `git checkout branchname`

Adding a file in branch `echo "#content">> filename.txt`

Then add the file and push the file. To create the branch remotely we have to use `git push --set-upstream origin branchname`

```
Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (mybranch)
$ echo "#stuff on branch" >> stuffonbranch.txt

Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (mybranch)
$ git add stuffonbranch.txt
warning: LF will be replaced by CRLF in stuffonbranch.txt.
The file will have its original line endings in your working directory

Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (mybranch)
$ git commit -m "add to the branch"
[mybranch 889cf83] add to the branch
 1 file changed, 1 insertion(+)
 create mode 100644 stuffonbranch.txt

Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (mybranch)
$ git push
fatal: The current branch mybranch has no upstream branch.
To push the current branch and set the remote as upstream, use

    git push --set-upstream origin mybranch


Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (mybranch)
$ git push --set-upstream origin mybranch
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 331 bytes | 165.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
remote:
remote: Create a pull request for 'mybranch' on GitHub by visiting:
remote:      https://github.com/mskill/demo_test1/pull/new/mybranch
remote:
To github.com:mskill/demo_test1.git
 * [new branch]      mybranch -> mybranch
Branch 'mybranch' set up to track remote branch 'mybranch' from 'origin'.

Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (mybranch)
$ git push
Everything up-to-date
```

Switch the branch again to the master using `git checkout master`

Merge command to merge the branches `git merge mybranch`

As the merge command is used the new create branch will be merged to the master branch and the file will be inserted to it. Previously, we have 2 file in the master, now there are 3 files. Make sure to push the files using

```
git push
```

```
Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (mybranch)
$ git merge mybranch
Already up to date.

Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (mybranch)
$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.

Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (master)
$ git merge mybranch
Updating 664421a..889cf83
Fast-forward
 stuffonbranch.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 stuffonbranch.txt

Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (master)
$ git merge mybranch
Already up to date.

Skill07@DESKTOP-FR7C17B MINGW64 ~/Downloads/demo_test1 (master)
$ git push
Total 0 (delta 0), reused 0 (delta 0)
To github.com:mskill/demo_test1.git
   664421a..889cf83  master -> master
```

Now, the file which is in the branch, is now in the master branch